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Update on China's implementation of Revised National Standard on Cotton Baling (GB6975-2013)

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Report Highlights:

On December 31, 2013, China's National Standardization Technical Committee on Cotton Processing published the final version of National Standard on cotton baling (GB6975-2013). The Standard was notified to the World Trade Organization (WTO) on August 21, 2013. As a reference, this report contains an UNOFFICIAL translation of the final Standard which went into effect on April 2014. However, as cotton baling practices differ among world cotton suppliers, full implementation of China's revised standards remains impractical. Thus far, the U.S. cotton industry has not faced significant problems related to this standard.

Executive Summary:

On December 31, 2013, China's National Standardization Technical Committee on Cotton Processing published the final version of National Standard on cotton baling GB6975-2013 which took effect on April 1, 2014. On June 23, 2014, AQSIQ published a short notice requesting China's industry associations and importers to notify overseas cotton suppliers of the baling requirements, and additionally, requesting entry ports to notify the cotton importers of the same and guide the importers to source cotton meeting the baling requirements.

According to industry sources, one key element of the revised Standards requires that the packing material be "plain white cotton cloth and plastic that does not contaminate cotton or generate foreign fibers." However, the definition of plastic material is still unclear. Moreover, as cotton baling practices differ among world cotton suppliers, full implementation of China's revised standards remains impractical. Thus far, the U.S. cotton industry has not faced significant problems related to this standard.

The Standard was notified to the WTO on August 21, 2013. This report contains an UNOFFICIAL translation of the Standard (The Standard draft was published as report CH12068 in November 2012). Post will continue to monitor implementation and continue contact with AQSIQ and industry associations.

BEGIN TRANSLATION

GB 6975-2013

Cotton Baling

China's National Standardization Technical Committee on Cotton Processing

June, 2014

1 Scope

This standard stipulates the technical requirements for cotton bales, packing method, bale labeling and test methodology.

This standard applies to cotton and short lint packing.

2 Reference Documents

GB/T 228.1 Metal Material, Stretching Test, Part One – Test Methodology under Room Temperature

GB/T 1040.3-2006 Plastic, Stretching Performance Test, Part Three – Test Conditions for Membrane and Sheet

GB1103.1 Cotton, Part One - Saw Ginned Cotton

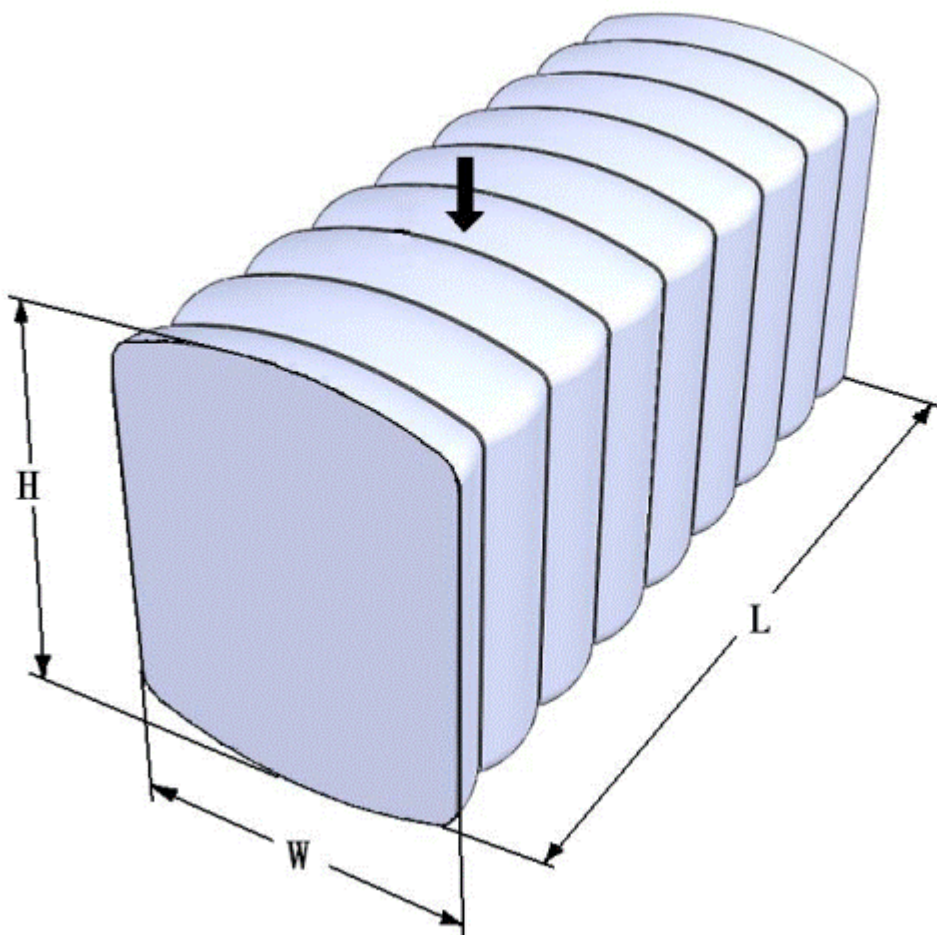
GB1103.2 Cotton, Part Two - Roller Ginned Cotton
GB/T 3923.1 Textile, Textile Stretching Performance, Part One - Testing on Breaking Strength and Breaking Elongation rate, Stripe Sample Method
GB/T 4668 Test of Density for Machinery Fabrics
GB/T 6672, Plastic Membrane Sheet, Test of Thickness, Mechanic Test Method
GB/T 16422.2 Light Exposure Method in Lab for Plastic, Part Two, High Intensity Discharge
GB/T 16422.3 Light Exposure Method in Lab for Plastic, Part Three, Fluorescent UV lamp
GH/T 1068 Polyester Band for Cotton Packing

3 Technical Requirements

3.1 Bale Shape and Size

3.1.1 The code for bale shape and size as shown on chart 1





L--- Bale length
W---Bale width
H--- Bale height

Chart 1 the bale shape and size code

3.1.2 Bale size, weight and allowed differences should conform to the requirements on table 1.

Table 1: Bale size, weight and allowed differences

Bale Codes	Length, L/mm		Width W/mm		Height H/mm		Bale weight/Kg	
	Basic size	Allowed difference	Basic size	Allowed difference	Basic size	Allowed difference	Weight	Allowed difference
I	1400	-30	530	-10	700	+150	227	±10
II	800	-15	400	-10	600	+50	85	±5

3.1.3 For code I bales, the height difference for the two bale ends shall be within 50 mm. For code II bale, the height difference for the two bale ends shall be within 20 mm.

3.2 Packing Material

3.2.1 Packing Material

3.2.1.1 Use plain white cotton cloth and plastic that do not contaminate cotton or generate foreign fibers.

3.2.1.2 The plastic packing bag shall have ventilation holes to ensure good air permeability, and shall prevent foreign matter and dust from entering the bale or contaminating the cotton. When creating vent holes, no membrane residue or waste shall be left inside or outside of the packing bag.

3.2.1.3 The technical requirements for making the plain white cloth are shown on Table 2.

Table 2: Technical Requirements for Making Plain White Cloth

Item	Cotton cloth density (strain/10cm)	Breaking strength/N
Warp	≥ 118	≥180
Weft	≥118	≥220

3.2.1.4 Refer to Table 3 for technical requirements of plastic packing bag for cotton bales

Table 3: Technical Requirements of Plastic Packing Bag for Cotton Bale

Thickness	Tensile Strength/MPa		Elongation at break/%	Aging resistance (800h xenon lamp light aging)	
	Longitude	Transverse		Tensile strength re-tension rate/%	Retention rate of elongation at break/%
0.145±0.015	≥24	≥23	≥700	≥87	≥87

3.2.2 Binding Materials

3.2.2.1 Specifications for galvanized steel wire, number of binding belts, and mechanical performance shall comply with Table 4 regulations.

Table 4: Specification for galvanized steel wire, number of binding belts, and mechanical performance

Mechanical Performance						
Tying materials	Size/mm	Tying bundles	Tensile strength/MPa		Elongation at break/%	
			High carbon	Low carbon <i>b</i>	High carbon	Low carbon <i>b</i>
Galvanized steel wire	Φ2.8 a	8~10	1400	400 ~510	≥4	≥ 15
	Φ3.4		~1650			
a . Size Φ 2.8mm galvanized steel wire only suitable for II type packaging bales						
b . Low carbon galvanized steel wire only suitable for II type short fiber cotton packaging.						

3.2.2.2 Specifications for polyester belts for tying cotton, number of binding belts, and mechanical

performance shall comply with Table 5 regulations.

Table 5: Polyester belt for tying cotton's specification, number of binding belts, and mechanical performance

Tying materials	Size/mm	Tying bundles	Mechanical Performance				
			Breaking strength/N	Elongation at break/%	Aging resistance (tensile breaking strength protection rate for 120h UV light aging) /%	Connector pull off force/N	Joints peel force/N
Polyester belt for tying cotton	a Width (19.0~20.0) x thickness (1.20~1.50) (section)	8	≥ 10500	12 ~ 18	>96	≥ 9270	>200
a. Section=Width*thickness							

4 Packing Methods

4.1 Bale Tying Method: After compressing cotton bales and packing with cotton cloth, use binding material to tie the bales.

4.2 Packaging Bag Method: After compressing and tying cotton bales, use a packaging bag to cover the bales.

4.3 Cotton cloth packaging applies to both Bale Tying Method and Packaging Bag Method, while plastic packing bags only apply to the Packaging Bag Method.

4.4 After tying cotton bales packed with cotton cloth, use cotton thread to tightly mend the ends of the cloth.

4.5 When cutting samples during packing, the same cotton cloth shall be used to tightly mend the cut. It is permitted to use other materials that do not generate foreign fibers and do not cause contamination to cover the cut.

4.6 Prior to delivery from the plant, cotton bales shall not have any exposed cotton (except from the air holes of plastic packing bag), and shall not be broken or contaminated.

4.7 The binding cable arrangement for cotton bales shall be even and balanced with each other. Binding cable connections should be tight, reliable, smooth, and shall not easily scratch other contact materials.

4.8 The overlapping part of polyester belts for binding cotton bales shall be between 60mm~80mm in length.

5 Mark

5.1 Cotton bale mark according to inspection batch

5.1.1 For cotton bales in cloth packing, brush the label in black at both ends. The labeling information shall include cotton origin (province, autonomous region, municipality, or county), cotton processing company, cotton quality label, batch number, bale number, gross weight, foreign fiber content code, and production date.

5.1.2 For cotton bales in plastic packing, labels shall be fixed with stickers or other means of identification at both ends. The labeling information shall include that which is described in 5.1.1.

5.1.3 The cotton quality label shall comply with the requirements as described in GB1103.1 and GB1103.2.

5.1.4 Information like placing direction and trade mark can be attached to the surface of the plastic package without interference to the cotton bale label.

5.2 Cotton bale labels for one by one inspection

5.2.1 If a bar code is adopted as a cotton bale label, the bar code shall be fixed at both ends of the cloth or plastic packing.

5.2.2 For cotton bales in cloth packing, brush the label in black at both ends. The labeling information shall include cotton origin (province, autonomous region, municipality, or county), cotton processing company, cotton quality label, batch number, packing number, gross weight, foreign fiber code, and production date.

5.3 The polyester banding belt used for cotton packing shall indicate its manufacturer's trade mark, manufacturer name, and production date.

6 Test Method

6.1 Dimensions

6.1.1 For every 20 cotton bales (count as 20 bales if less than 20) that have been processed and stored for 24 hours, take one bale and measure its dimensions.

6.1.2 Place the cotton bale on a flat surface, lean two right angle rulers with an accuracy of 1mm against the symmetry surfaces of the cotton bale and measure its dimensions;

6.1.3 Measuring positions of length, width, and height respectively shall cover the two ends and central part of all corresponding surfaces of the cotton bale and use the maximum values, unit (mm).

6.1.4 As the actual values of the bale, rounding off to single digits.

6.2 Density of cotton cloth

Determined as in GB/T 4668

6.3 Breaking strength of cotton cloth

Determined as in GB/T 3923.1

6.4 Thickness of plastic package

Determined as in GB/T 6672

6.5 Tensile strength and elongation at break of the plastic package

6.5.1 Determined as in GB/T 1040.3-2006

6.5.2 Stretching speed at (500±50) mm/min

6.5.3 Dimensions of the sample should conform with the Type Two as in GB/T 1040.3-2006, and its width is 10mm.

6.5.4 Test result of tensile strength should be rounded off to single digits. Test results of breaking elongation rates should be rounded off to one percent.

6.6 Anti-aging test of the plastic package

6.6.1 Determined as in GB/T 16422.2

6.6.2 Using method in 6.5, measure the tensile strength and breaking elongation rate of plastic packaging before and after the anti-aging experiment.

6.6.3 Calculating method for the retention rate of tensile strength as Formula (1)

$$\Delta\sigma_M = \frac{\sigma'_M}{\sigma_M} \times 100\% \dots\dots\dots (1)$$

$\Delta\sigma_M$ — Retention rate of tensile strength, %

σ'_M — Tensile strength after the anti-aging experiment, MPa

σ_M — Tensile strength before the anti-aging experiment, MPa

6.6.4 Calculating method for the retention rate for breaking elongation rate as Formula (2)

$$\Delta\varepsilon_{tB} = \frac{\varepsilon'_{tB}}{\varepsilon_{tB}} \times 100\% \dots\dots\dots (2)$$

$\Delta\varepsilon_{tB}$ — Retention rate of breaking elongation rate, %

ε'_{tB} — Breaking elongation rate after the experiment of anti-aging, %

ε_{tB} — Breaking elongation rate before the experiment of anti-aging, %

6.6.5 The results for calculating the retention rate of tensile strength and breaking elongation rate should be rounded off to one percent.

6.7 Tensile strength and breaking elongation rate of galvanized steel wire

Measured according to method provided in GB/T228.1

6.8 Specification of polyester plastics belt for cotton baling

6.8.1 Take five samples from each sample belt, with each sample at 1,000 mm in length (measure thickness and width of the samples)

6.8.2 Use a micrometer with a precision of 0.01mm to measure width and thickness (two times) at 1/3 and 2/3 of each sample, and obtain 10 data in measurement. The samples shall not be pressed to obviously change the measured width and thickness),

6.8.3 Calculate the average for width and thickness, unit (mm)

6.8.4 Keep two digits after the decimal point after rounding off for width; keep two digits after the decimal point after rounding off for the thickness.

6.9 Tensile strength and breaking elongation rate of polyester plastics belt for cotton baling

6.9.1 Length of the sample shall be determined by gauge length and special frocks size; the baling belt directly cut from the sample belt shall be used as a testing sample; valid sample size is 5;

6.9.2 Experiment conducts pursuant to provisions of GB/T 1040.3.2006,

6.9.3 Gauge length of the sample is 100mm; experiment speed is 100mm/min \pm 10mm/min;

6.9.4 Directly read the tensile break stress in the load indicator

6.9.5 Measure extension of the belt with an extensometer or a recorder or similar measurement capability, and calculate breaking the elongation rate using a percentage;

6.9.6 When the sample slides in the frock or breaks within 10mm to any frock, or was broken due to obvious floss, the sample is invalid, and another sample shall be used for the experiment;

6.9.7 Sample broken within gauge length and does not have the floss in 6.9.6 are valid samples.

6.9.8 The tensile strength and breaking elongation rate are the result of calculating the average of five valid samples;

6.9.9 Test result of tensile strength should be round off to single digits. Test result of breaking elongation rate should be round off to one percent.

6.10 Experiment of anti-aging of polyester plastics belt for cotton baling

6.10.1 Measured according to method provided in GB/T 16442.3.

6.10.2 Using method in 6.9, measure the tensile strength of polyester plastics belt before and after the experiment of anti-aging respectively.

6.10.3 Calculating method for the retention rate of tensile strength as Formula (1)

6.10.4 The result of calculating the retention rate of tensile strength should be round off to one percent.

6.11 Breaking strength of belt joint of polyester plastics belt for cotton baling

6.11.1 Measured using method in 6.9.1, 6.9.2 and 6.9.3;

6.11.2 Keep the joint in center of the samples, and read the breaking strength in the load indicator when the joint breaks, unit (N);

6.11.3 Valid sample of the experiment is 5. Joints broken within the gauge length and do not have the floss in 6.9.6 are valid sample size.

6.11.4 The breaking strengthen of belt joint is the result of the average of five valid samples,

6.11.5 Test result of tensile strength should be round off to single digits.

6.12 Peel strength of joint of polyester plastics belt for cotton baling

Measured according to method provided in GB/T 1068.

END TRANSLATION

